

# *Meeting Summary*

## **Hospital Associated-Venous Thromboembolism (HA-VTE) Stakeholder Meeting**

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September 21, 2012

Atlanta, GA

National Center on Birth Defects and Developmental Disabilities  
Division of Blood Disorders



## Background

Venous thromboembolism (VTE) includes both deep vein thrombosis (DVT) and pulmonary embolism (PE), and is an important and growing public health issue. DVT is a blood clot that forms in the deep veins of the body and PE occurs when a clot breaks free and blocks the arteries of the lungs. The precise number of people affected by VTE is unknown; however, estimates suggest that 350,000 to 900,000 events occur in the United States yearly with healthcare costs ranging from \$1 billion to \$10 billion. VTE is associated with substantial health impacts including mortality. In the United States, it is estimated that as many as 100,000 people die of PE each year. With many of the risks for VTE, such as obesity, advanced age, and chronic diseases increasing in the US population, we can expect to see increasing numbers of people affected by VTE.

Fortunately, many cases of VTE can be prevented and, in those that occur, poor outcomes may be preventable with early and accurate diagnosis and management. However, one of the major challenges for preventing VTE is the ability to effectively predict which individuals are at greatest risk and ensure that appropriate prevention measures are taken. People who have recently been hospitalized or those who have had surgery, have an increased risk of developing VTE. The application of appropriate prevention steps during and after hospitalization among these individuals at high risk can result in a significant reduction in overall VTE occurrence, healthcare burden, and death. Prevention of hospital-associated VTE (HA-VTE) is a national priority. It is a Healthy People 2020 objective and a key component of the U.S. Department of Health and Human Services Partnerships for Patients Initiative. Other federal agencies including the Centers for Medicare and Medicaid Services (CMS) and the Agency for Healthcare Research and Quality (AHRQ) as well as national organizations such as The Joint Commission, National Quality Forum, American College of Surgeons, and others have initiated programs and activities focusing on HA-VTE prevention.

## Executive Summary

The Division of Blood Disorders (DBD), National Center on Birth Defects and Developmental Disabilities (NCBDDD), Centers for Disease Control and Prevention (CDC) convened a stakeholder meeting on September 21, 2012 in Atlanta, Georgia to inform the development of and assess the need for HA-VTE surveillance.

The specific meeting objectives were:

- 1. To ascertain stakeholder interest in and need for surveillance of HA-VTE occurrence and related prevention activities**
- 2. To identify characteristics of an ideal HA-VTE surveillance system**
- 3. To determine barriers that might prevent use of an HA-VTE surveillance system**

## Stakeholders in attendance

**Kristie Baus, MS, RN**  
Centers for Medicare and Medicaid Services

**Michael Gould, MD, MS**  
Kaiser Permanente

**Adil Haider, MD**  
American College of Surgeons

**Stuart Haines, PharmD, BCPS, BCACP**  
American Society of Health System Pharmacists

**Amy Helwig, MD, MS**  
Agency for Healthcare Research and Quality

**W. Keith Hoots, MD**  
National Institutes for Health/National Heart  
Lung Blood Institute

**Jack Jordan, MS**  
Partnership for Patients

**Denise Krusenowski, MSN, RN, CMSRN**  
The Joint Commission

**Andrew Lyzenga, MPP**  
National Quality Forum

**Lisa Moores, MD, FCCP**  
American College of Chest Physicians

**Karen Nakano, MD**  
Centers for Medicare and Medicaid Services

**Mark Piasio, MD**  
America's Health Insurance Plans

**Marta Render, MD**  
Veterans Administration

**Don Wright, MD, MPH**  
Office of the Assistant Secretary for Health

**Neil Zakai, MD, MSc**  
American Society of Hematology

## Introductory Presentations:

The meeting began with four introductory presentations to provide a general overview of CDC's goals for surveillance of HA-VTE and to learn about current VTE monitoring efforts including those at CMS and AHRQ. The presentations were:

The Division of Blood Disorders' Interest and Role in HA-VTE Surveillance  
**Michele Beckman, MPH (CDC)**

Overview of Current Venous Thromboembolism Monitoring Efforts  
**Scott Grosse, PhD (CDC)**

Overview of Center for Medicare and Medicaid Services' (CMS) VTE Monitoring Efforts  
**Kristie Baus, MS, RN (CMS)**

Overview of Agency for Healthcare Research and Quality's (AHRQ) VTE Monitoring Efforts  
**Amy Helwig, MD, MS (AHRQ)**

## Stakeholder input for HA-VTE surveillance:

The presentations were followed by an open discussion of current monitoring events to get a sense of participants' views of strengths and gaps. The remainder of the meeting was dedicated to obtaining input from the participating stakeholders on developing and conducting surveillance for the occurrence of HA-VTE and use of prevention efforts. To facilitate discussions, stakeholders were asked to share their top three answers to five questions related to the development and utility of a new HA-VTE surveillance system. The answers were collected, categorized and posted as affinity diagrams for all participants to view. This was followed by an open discussion period during which the diagrams were presented and the stakeholders, as a group, had an opportunity to discuss the answers with CDC. The questions and discussion points are summarized below.

### 1. What are the strengths of existing monitoring efforts?

The strengths that were stated were not specific to one particular effort but rather reflected strengths of various efforts. The most highly regarded were those systems that: are population based; collect robust, valid data; focus on high risk populations; utilize electronic health records; are relatively inexpensive; are incentive based and, therefore, more widely used; and provide opportunities for a variety of organizations to report data. In addition, participants noted that a major ancillary benefit of current reporting efforts has been the increased awareness of VTE.

### 2. What are the limitations of existing monitoring efforts?

Participants expressed dissatisfaction with the differing goals of existing monitoring activities, a lack of clarity regarding the populations that should be monitored and a lack of consensus among guidelines for VTE prophylaxis, which makes it difficult to understand which data to collect and how to interpret the results. They noted that many of the existing HA-VTE monitoring projects focus on surgical patients, yet the majority of HA-VTE events occur in medical patients. Stakeholders also expressed concern regarding the low utility of current quality and performance measures (i.e., most are process oriented and the outcome measures are not broadly applicable). They expressed that many initiatives:

- 1) are limited in their ability to monitor post-discharge events;
- 2) do not allow for or weigh risk assessment when monitoring use of prophylaxis;
- 3) rely upon administrative data that are more reflective of cost accounting rather than patient care and outcomes;
- 4) have unclear indicators such as “preventable VTE”; and
- 5) are not flexible enough to respond to changes in practice and knowledge (e.g., documenting the use of new oral anticoagulants as a type of prophylaxis).

### 3. What are the characteristics or attributes you would like to see in an HA-VTE Surveillance System?

Participants cited several preferences for monitoring VTE, these included:

- » Collection of prospective, real-time information;
- » Surveillance that is comprehensive over the continuum of care, including the ability to track VTE outcomes occurring after discharge from the inpatient setting;

- » Systems should have the ability to monitor both VTE outcomes and VTE prevention practices, including adverse outcomes associated with prevention practices;
- » Data collection methods should be efficient with minimal burden on providers by
  - Utilizing and leveraging electronic health records (EHRs) and existing systems,
  - Collaborating with other agencies with a need for similar information;
- » Data collected should be uniform and of high quality by incorporating the use of
- » Standardized definitions,
- » Diagnosis and prophylaxis guidelines,
  - A coordinated approach across private, public, and government agencies;
- » The surveillance should incorporate and/or provide clinical utility, allowing for rapid intervention, and be easily modifiable as evidence emerges.

#### **4. What are potential barriers to implementing an HA- VTE surveillance system?**

Participants cited lack of resources for expanded data collection and provider fatigue coupled with limited user incentive or perceived utility as the main deterrents to adoption of new and more comprehensive surveillance systems. Participants noted that hospital staff and care providers are already overburdened with current required reporting efforts and lack adequate staff, funds, or time needed for additional data collection and monitoring. Providers would like to be able to use the data that they are helping to collect; with limited access and feedback for internal use, the value or incentive for collecting data is lacking. Further, given the current state of unclear prevention guidelines and lack of national VTE prevention standards, participants felt it would be difficult to coordinate and provide consistency across healthcare systems, thus resulting in poor data quality.

#### **5. What information would you want an HA-VTE system to report?**

Stakeholders were interested in receiving information about the occurrence and burden of VTE but also stressed the need for real-time information on VTE prevention practices.

Information needed on VTE included:

- » Rates of HA-VTE occurrence;
- » Types of VTE that are occurring and when (inpatient/during hospitalization, after discharge/outpatient);
- » Associated risk factors and risk settings (which patient groups are affected);
- » Description and quantification of associated morbidity and mortality.

Participants also want more information to inform appropriate and safe use of VTE prophylaxis. Participants described a desire to monitor and assess VTE prophylaxis use, including:

- » Which patients are receiving prophylaxis and when;
- » What types of prophylaxis are being used and their effectiveness;
- » Associated adverse outcomes and complications;
- » Rates of VTE occurrence despite prophylaxis use.



Other useful and needed information mentioned included an assessment and knowledge of the use of other VTE prevention practices such as risk assessment, diagnostic methodology and treatment practices (use, types, and length of use).

Stakeholders also stressed the need for data that could be used for quality assessments and to guide policy. Ideally, they would like surveillance data that can be used for cost-benefit analyses, can be linked to healthcare indicators such as length of stay, provides information on performance that facilitates comparisons of approaches and practices, and can be packaged and easily understood by consumers.

## Stakeholder Recommendations:

Participants felt strongly that improved HA-VTE surveillance was needed and integral to understanding and reducing HA-VTE. They felt that, as the nation's public health agency, CDC would be an appropriate entity to lead and develop this effort, providing impartial and comprehensive data that are currently lacking.

The stakeholders communicated many important considerations and caveats for developing surveillance activities. They expressed the importance of knowing the goal before designing surveillance activities, stressing the need to set a goal and work backwards to define the system to achieve the goal. They also suggested that CDC should consider the current limitations of collecting information on VTE and start small. The majority of participants supported a focused approach starting with a defined population at first and then expanding or scaling-up once methods are developed. Although medical patients may be the higher risk group, many of the participants felt that there are too many unknowns for this population and therefore, surgical patients may be a better initial or pilot population.

To limit the burden and improve quality of data collection, stakeholders recommended integrating surveillance into the clinical workflow and defining standard data for EHRs which can be reported on a regular basis. They also suggested that these definitions should be unified for the main EHR vendors which would help to increase participation and provide consistent reporting for surveillance activities.

To improve participation, participants recommended that input and reporting in the surveillance activities should be linked to concrete benefits for the providers. By providing timely reports and access to the data for internal use, providers will be able to see the value of the surveillance activities.

Finally, stakeholders acknowledged that there are many VTE prevention activities occurring in the different federal agencies, and thus recommended collaboration among the agencies noting that information will be fragmented if CMS, AHRQ, and CDC are all concerned with different data with different definitions.

## Concluding Remarks:

Althea Grant, Acting Division Director, summarized the key points of the meeting. She recognized that the stakeholders were supportive and enthusiastic for CDC surveillance in this area. The participants highlighted the need for having a focused approach in developing a surveillance system that utilizes electronic health records and minimizes burden, as well as one that is capable of reporting issues related to both HA-VTE outcomes and prevention practices. As a federal agency, the call for agency collaboration was also clearly heard.

## CDC Participants

**Coleen Boyle, PhD, MSHyg**  
Director, National Center on Birth Defects & Developmental Disabilities

**Althea Grant, PhD**  
NCBDDD/DBD  
Acting Division Director  
Epidemiology and Surveillance Branch Chief

**Christopher Parker, PhD**  
NCBDDD/DBD  
Deputy Director

**Scott Grosse, PhD**  
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Research Economist & Associate Director  
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